

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: STREETWORKS

Report Number: P158735

Luminaire Tested: **VST-F11-LED-E-U-SL4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158735
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33714)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-F11-LED-E-U-SL4
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (77) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26342.7 lumens
Efficiency: N/A
Efficacy: 93.2 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type IV - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 282.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

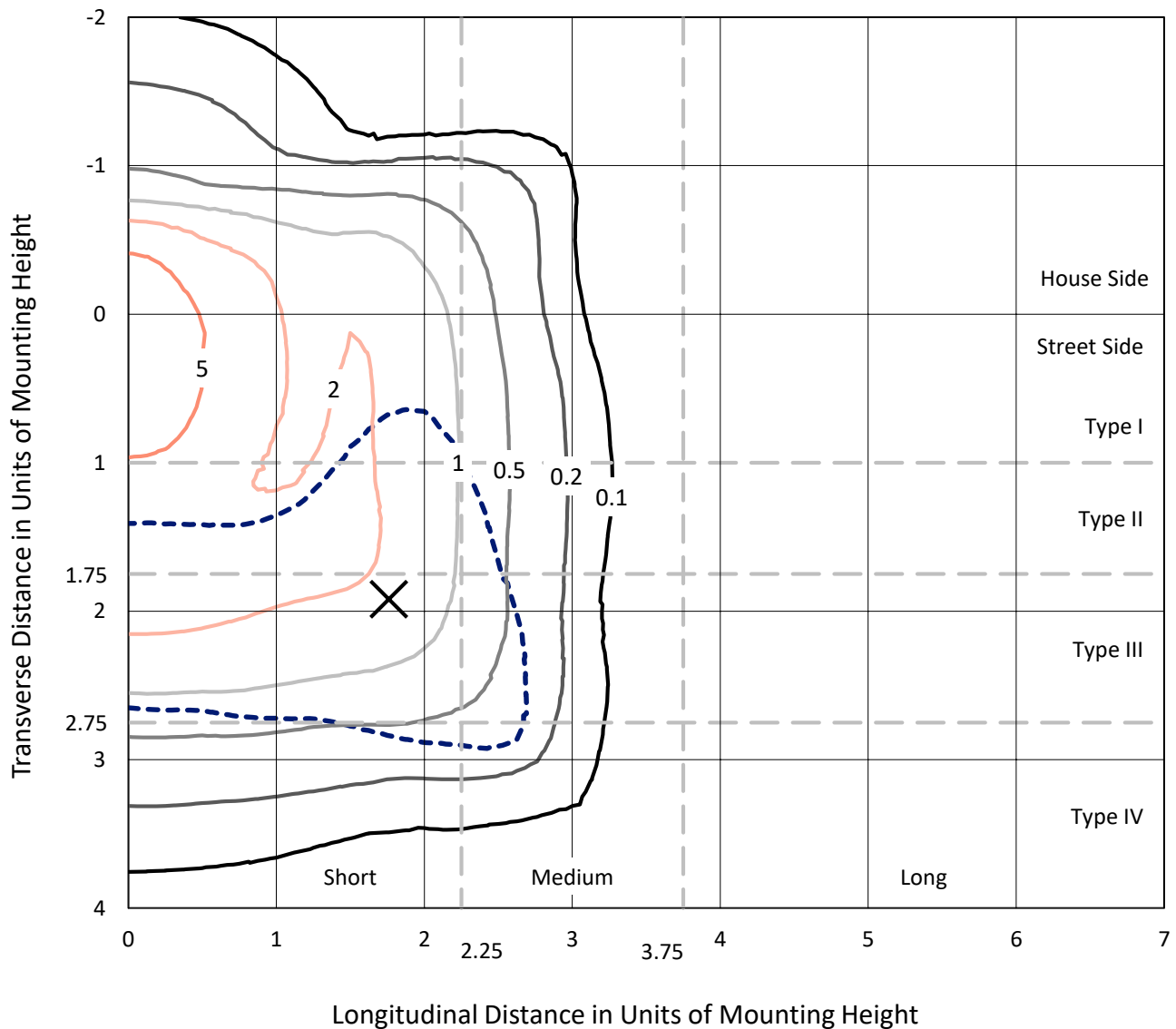


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

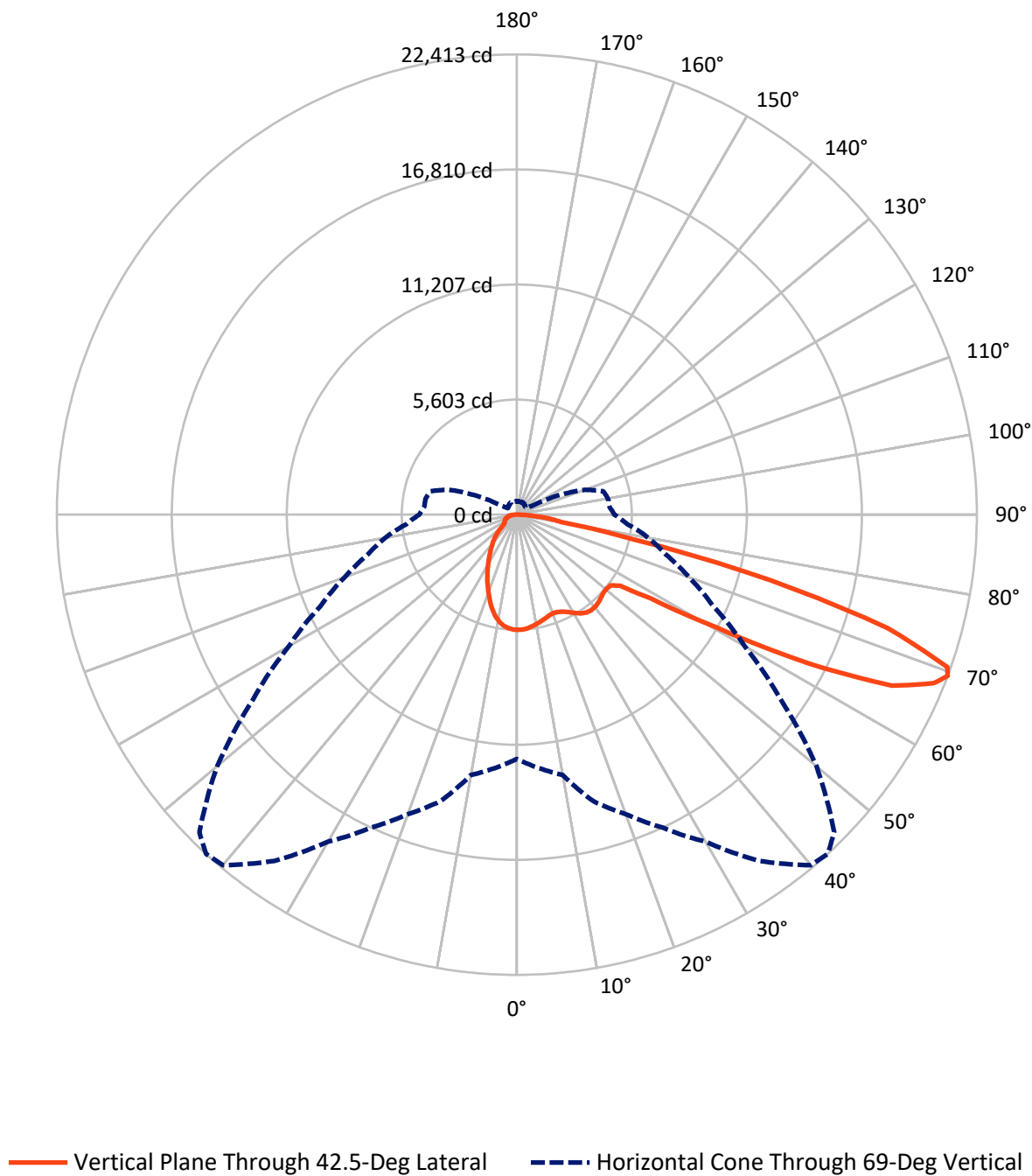


Based on 25 foot mounting height. Maximum calculated value = 9 fc
Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5856.4	0.0	5856.4
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	20486.3	0.0	20486.3
	% Fixture	77.8	0.0	77.8
Total	Lumens	26342.7	0.0	26342.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	522.2	2.0
10°-20°	1407.5	5.3
20°-30°	2052.4	7.8
30°-40°	2616.4	9.9
40°-50°	3044.3	11.6
50°-60°	4631.8	17.6
60°-70°	8182.0	31.1
70°-80°	3376.3	12.8
80°-90°	509.8	1.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	26342.7	100.0
0°-180°	26342.7	100.0

Coefficient of Utilization



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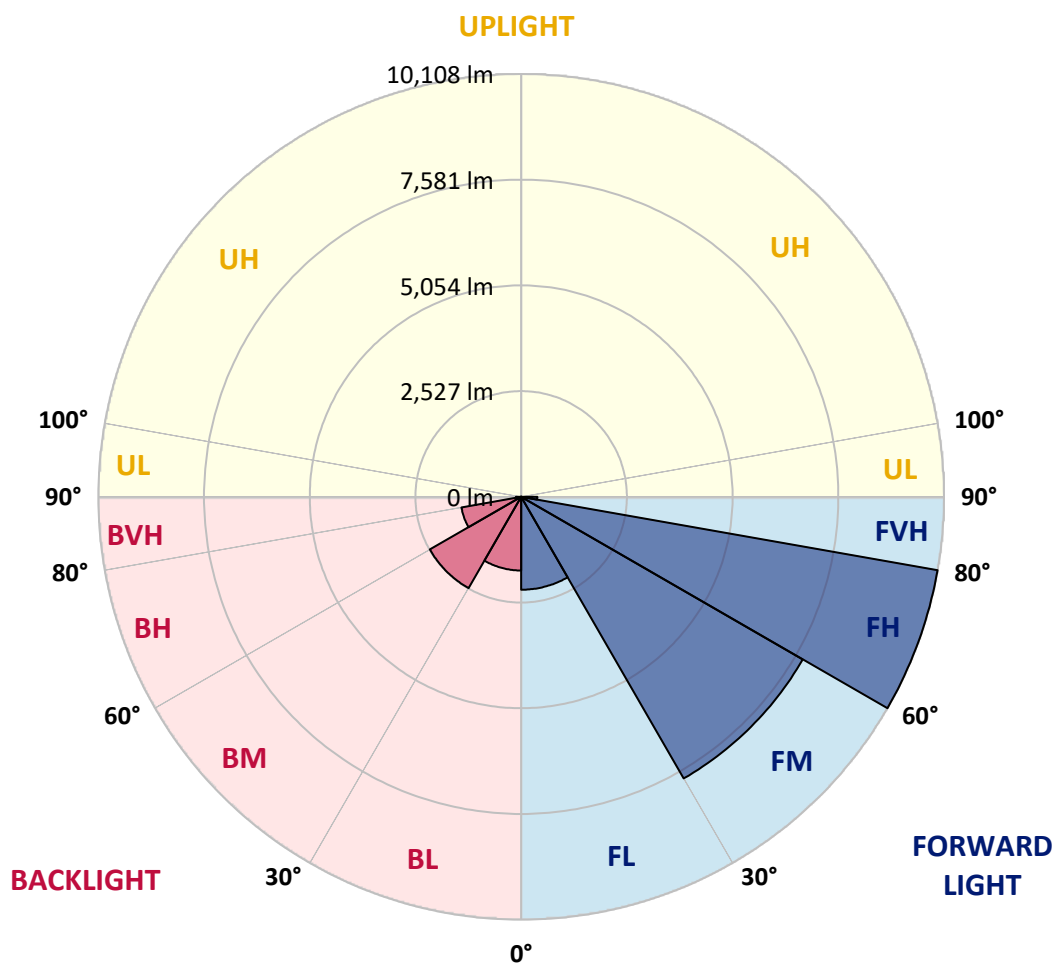
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2221.3	8.4			
FM	(30°-60°)	7771.8	29.5			
FH	(60°-80°)	10107.7	38.4			G4/12000
FVH	(80°-90°)	385.5	1.5			G3/500
BL	(0°-30°)	1760.8	6.7	B3/2500		
BM	(30°-60°)	2520.7	9.6	B3/5000		
BH	(60°-80°)	1450.6	5.5	B3/2500		G3/2500
BVH	(80°-90°)	124.3	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	42.5°	45°
0°	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1
2.5°	5591.9	5611.9	5604.7	5604.7	5610.1	5601.0	5601.0	5604.7	5595.6	5601.0	5599.2
5°	5572.0	5582.9	5579.2	5579.2	5579.2	5572.0	5568.3	5566.5	5553.8	5553.8	5548.4
7.5°	5528.4	5532.0	5537.5	5530.2	5528.4	5526.6	5513.8	5506.6	5492.1	5479.3	5483.0
10°	5470.3	5468.4	5477.5	5472.1	5464.8	5459.4	5448.5	5435.8	5419.4	5403.1	5401.2
12.5°	5404.9	5403.1	5410.3	5406.7	5401.2	5390.3	5381.3	5359.5	5334.0	5314.1	5312.3
15°	5363.1	5357.7	5364.9	5357.7	5348.6	5337.7	5321.3	5294.1	5248.7	5228.7	5212.4
17.5°	5403.1	5394.0	5397.6	5388.5	5375.8	5346.8	5308.6	5250.5	5185.1	5150.6	5125.2
20°	5542.9	5526.6	5530.2	5521.1	5492.1	5453.9	5381.3	5279.6	5168.8	5112.5	5072.5
22.5°	5742.7	5730.0	5735.4	5726.3	5697.3	5639.2	5530.2	5384.9	5226.9	5145.2	5081.6
25°	6046.0	6056.9	6060.5	6018.7	6002.4	5895.2	5744.5	5542.9	5332.2	5236.0	5148.8
27.5°	6387.4	6387.4	6403.8	6387.4	6354.7	6229.4	6016.9	5773.6	5502.9	5372.2	5266.8
30°	6719.8	6716.1	6747.0	6743.4	6690.7	6549.1	6307.5	6011.5	5702.7	5555.6	5421.2
32.5°	7072.1	7083.0	7103.0	7095.7	7026.7	6830.6	6540.0	6218.5	5893.4	5731.8	5581.0
35°	7453.5	7458.9	7466.2	7462.6	7322.7	7075.7	6710.7	6351.1	6013.3	5853.5	5697.3
37.5°	7834.9	7829.4	7820.4	7742.3	7582.4	7239.2	6814.2	6427.4	6073.2	5900.7	5739.0
40°	8176.3	8145.5	8116.4	7994.7	7749.5	7331.8	6854.2	6445.5	6067.8	5889.8	5731.8
42.5°	8363.4	8328.9	8269.0	8116.4	7818.5	7340.9	6826.9	6391.0	6011.5	5835.3	5679.1
45°	8397.9	8372.5	8314.4	8143.6	7802.2	7282.8	6743.4	6302.1	5927.9	5751.8	5604.7
47.5°	8316.2	8296.2	8239.9	8071.0	7731.4	7195.6	6647.1	6207.6	5846.2	5680.9	5539.3
50°	8190.9	8172.7	8129.1	7974.7	7651.5	7135.7	6598.1	6158.6	5819.0	5668.2	5537.5
52.5°	8394.3	8408.8	8281.7	8112.8	7736.8	7188.3	6652.6	6209.4	5868.0	5719.1	5582.9
55°	11556.2	11536.2	10771.6	10130.5	8984.5	7945.7	7170.2	6612.6	6247.6	6098.6	5971.5
57.5°	15016.0	14947.0	14632.8	14033.4	12802.1	11158.5	9663.8	8392.5	7891.2	7676.9	7691.4
60°	16145.6	16171.0	16103.8	15891.4	15450.0	14594.6	13457.7	12502.4	11561.6	11102.2	11154.8
62.5°	16772.2	16817.6	16875.7	16828.5	16685.0	16487.1	16343.6	16430.8	16300.0	15969.4	15706.1
65°	16859.4	16952.0	17144.5	17297.1	17371.5	17558.6	17998.1	19051.5	20014.0	20077.6	19614.5
67.5°	15134.0	15390.1	15807.8	16514.3	17119.1	17783.8	18844.4	20446.3	21866.5	21913.7	21481.5
69°	11899.4	12391.6	12880.2	14458.4	15520.9	16823.0	18392.2	20580.7	22282.4	22413.2	21868.3
70°	9534.8	9827.2	10248.6	11834.1	13421.4	15081.3	17355.2	20137.5	21997.3	22260.6	21659.5
72.5°	5724.5	5837.1	5982.4	6550.9	7368.1	8846.5	11861.3	16418.0	18555.7	18908.0	18143.4
75°	3701.3	3694.1	3706.8	3864.8	3912.0	4195.3	5145.2	8446.9	12104.7	12744.0	11828.6
77.5°	2787.8	2813.2	2773.3	2787.8	2775.1	2851.4	2880.4	3023.9	4778.3	5886.2	5263.2
80°	2460.9	2473.6	2475.4	2468.2	2379.2	2371.9	2419.1	2337.4	2172.1	2204.8	2112.2
82.5°	1403.9	1402.1	1418.4	1541.9	1592.8	1759.9	1828.9	1867.0	1723.5	1616.4	1462.0
85°	909.9	917.2	935.3	973.5	935.3	949.8	933.5	966.2	886.3	822.7	735.5
87.5°	372.3	372.3	395.9	430.4	401.4	394.1	337.8	334.2	283.3	256.1	199.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1
2.5°	5588.3	5599.2	5593.8	5601.0	5595.6	5595.6	5588.3	5586.5	5591.9	5584.7	5586.5
5°	5539.3	5541.1	5532.0	5535.6	5524.7	5521.1	5515.7	5501.1	5510.2	5501.1	5504.8
7.5°	5468.4	5463.0	5450.3	5432.1	5419.4	5414.0	5403.1	5383.1	5386.7	5370.4	5379.5
10°	5377.6	5359.5	5337.7	5310.4	5292.3	5275.9	5252.3	5228.7	5216.0	5201.5	5199.7
12.5°	5275.9	5254.1	5225.1	5183.3	5143.4	5116.1	5079.8	5038.0	5025.3	5001.7	4989.0
15°	5165.1	5130.6	5096.1	5048.9	5005.3	4963.6	4914.5	4861.8	4827.3	4791.0	4763.8
17.5°	5065.3	5025.3	4979.9	4934.5	4887.3	4836.4	4774.7	4709.3	4658.4	4591.2	4536.8
20°	4987.2	4936.3	4890.9	4843.7	4791.0	4729.3	4654.8	4571.3	4485.9	4411.4	4347.9
22.5°	4956.3	4876.4	4821.9	4774.7	4722.0	4649.4	4558.5	4460.5	4357.0	4253.4	4169.9
25°	4981.7	4863.7	4778.3	4722.0	4676.6	4602.1	4500.4	4380.6	4260.7	4137.2	4024.6
27.5°	5056.2	4905.4	4781.9	4692.9	4640.3	4565.8	4458.7	4331.5	4189.9	4051.8	3913.8
30°	5172.4	4976.3	4820.1	4694.8	4613.0	4527.7	4415.1	4268.0	4124.5	3966.5	3815.7
32.5°	5285.0	5050.7	4863.7	4702.0	4576.7	4465.9	4340.6	4195.3	4040.9	3875.7	3719.5
35°	5364.9	5099.8	4880.0	4685.7	4520.4	4382.4	4248.0	4102.7	3952.0	3783.1	3623.2
37.5°	5403.1	5127.0	4881.8	4642.1	4445.9	4293.4	4149.9	4006.4	3864.8	3705.0	3554.2
40°	5401.2	5125.2	4856.4	4585.8	4357.0	4195.3	4053.7	3913.8	3781.2	3641.4	3505.2
42.5°	5361.3	5096.1	4820.1	4531.3	4293.4	4113.6	3966.5	3832.1	3719.5	3596.0	3481.6
45°	5299.5	5047.1	4781.9	4505.9	4275.2	4095.4	3939.2	3808.5	3708.6	3596.0	3497.9
47.5°	5252.3	5019.9	4787.4	4551.3	4331.5	4144.5	3979.2	3835.7	3750.4	3659.6	3590.5
50°	5259.6	5032.6	4805.5	4578.5	4371.5	4182.6	4022.8	3892.0	3830.3	3806.7	3790.3
52.5°	5297.7	5052.5	4860.0	4723.8	4653.0	4511.3	4416.9	4335.2	4380.6	4291.6	4186.2
55°	5784.5	5704.5	5891.6	6067.8	6291.2	6374.7	6294.8	6280.3	6352.9	6051.4	5359.5
57.5°	7794.9	8002.0	8290.7	8443.3	8628.6	8579.5	8394.3	8239.9	8058.3	7705.9	6843.3
60°	11214.8	11058.6	10927.8	10559.1	10257.6	9905.3	9513.0	9177.0	8855.6	8348.9	7415.4
62.5°	14738.1	13653.9	12747.6	11872.2	11167.5	10582.7	10014.3	9509.4	9022.7	8316.2	7311.8
65°	17785.6	15502.7	13801.0	12516.9	11487.2	10599.1	9869.0	9171.6	8552.3	7724.1	6730.7
67.5°	19155.0	16294.5	13819.1	11979.4	10553.7	9347.7	8403.3	7350.0	6656.2	6125.9	5566.5
69°	19053.3	15689.8	12833.0	10568.2	8930.0	7524.3	6510.9	5412.1	4747.4	4522.2	4509.5
70°	18570.2	14665.5	11681.5	9422.2	7547.9	6151.3	5179.7	4193.5	3574.2	3419.8	3694.1
72.5°	15161.3	10363.0	7320.9	5590.1	4298.8	3398.0	2771.5	2199.4	1756.2	1521.9	1572.8
75°	8563.2	4798.3	3102.0	2344.7	1981.4	1638.2	1405.7	1198.7	1084.2	880.8	697.4
77.5°	3112.9	2059.5	1638.2	1416.6	1004.3	692.0	579.4	506.7	459.5	459.5	437.7
80°	1968.7	1551.0	1082.4	741.0	548.5	477.6	417.7	366.9	337.8	330.5	337.8
82.5°	1229.5	949.8	606.6	464.9	390.5	350.5	305.1	267.0	243.4	237.9	248.8
85°	606.6	470.4	368.7	328.7	308.7	287.0	252.4	216.1	208.9	223.4	261.5
87.5°	181.6	161.6	132.6	138.0	145.3	141.7	112.6	98.1	92.6	121.7	190.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1	5610.1
2.5°	5590.1	5588.3	5591.9	5586.5	5590.1	5591.9	5588.3	5604.7	5593.8	5595.6	5602.8
5°	5508.4	5504.8	5519.3	5515.7	5522.9	5530.2	5526.6	5550.2	5541.1	5548.4	5562.9
7.5°	5372.2	5379.5	5381.3	5381.3	5395.8	5419.4	5424.9	5439.4	5439.4	5459.4	5473.9
10°	5190.6	5192.4	5203.3	5201.5	5219.6	5245.1	5248.7	5274.1	5283.2	5315.9	5335.9
12.5°	4979.9	4970.8	4969.0	4967.2	4990.8	5018.0	5021.7	5065.3	5083.4	5112.5	5145.2
15°	4743.8	4720.2	4712.9	4727.5	4722.0	4738.3	4754.7	4778.3	4803.7	4861.8	4890.9
17.5°	4513.1	4465.9	4453.2	4436.9	4420.5	4420.5	4427.8	4456.8	4509.5	4540.4	4605.8
20°	4277.0	4220.7	4175.3	4131.8	4093.6	4079.1	4080.9	4117.2	4155.4	4206.2	4268.0
22.5°	4079.1	3993.7	3915.6	3857.5	3779.4	3777.6	3766.7	3777.6	3819.4	3832.1	3866.6
25°	3908.4	3793.9	3688.6	3594.2	3517.9	3477.9	3467.0	3463.4	3443.4	3438.0	3412.6
27.5°	3775.8	3637.8	3501.5	3387.1	3292.7	3238.2	3169.2	3120.2	3049.3	3031.2	2985.8
30°	3666.8	3517.9	3369.0	3220.0	3112.9	3014.8	2898.6	2813.2	2704.3	2633.4	2571.7
32.5°	3561.5	3410.7	3260.0	3112.9	2947.6	2795.1	2642.5	2509.9	2388.2	2279.3	2188.5
35°	3474.3	3330.8	3178.3	3000.3	2789.6	2569.9	2386.4	2235.7	2068.6	1954.2	1839.8
37.5°	3418.0	3287.2	3134.7	2889.5	2618.9	2382.8	2173.9	1990.5	1819.8	1647.3	1518.3
40°	3392.6	3278.2	3087.5	2787.8	2470.0	2208.4	1977.8	1774.4	1556.4	1362.1	1224.1
42.5°	3390.8	3274.5	3022.1	2675.2	2346.5	2061.3	1805.3	1561.9	1320.3	1120.6	984.4
45°	3423.5	3269.1	2953.1	2580.8	2237.5	1939.7	1634.5	1338.5	1067.9	919.0	846.3
47.5°	3510.6	3278.2	2896.8	2493.6	2134.0	1792.5	1438.4	1093.3	869.9	800.9	800.9
50°	3666.8	3330.8	2882.2	2431.8	2030.5	1621.8	1198.7	882.7	770.0	770.0	791.8
52.5°	3906.5	3441.6	2907.7	2388.2	1901.5	1396.6	944.4	761.0	739.2	759.2	788.2
55°	4458.7	3637.8	2942.2	2313.8	1705.4	1107.9	779.1	719.2	728.3	751.9	779.1
57.5°	5472.1	4057.3	2978.5	2150.3	1389.4	853.6	706.5	702.9	719.2	741.0	764.6
60°	6138.6	4591.2	3071.1	1903.3	1051.6	704.7	670.2	692.0	711.9	730.1	748.3
62.5°	6138.6	4742.0	3140.1	1627.3	790.0	641.1	646.6	681.1	704.7	713.7	724.6
65°	5746.3	4465.9	2905.8	1325.8	642.9	604.8	624.8	659.3	681.1	688.3	697.4
67.5°	5021.7	3944.7	2448.2	998.9	573.9	573.9	599.3	624.8	642.9	657.4	672.0
69°	4366.0	3539.7	2155.8	846.3	546.7	550.3	575.7	597.5	619.3	637.5	655.6
70°	3893.8	3236.4	1952.4	768.2	530.3	532.1	557.6	581.2	601.1	621.1	642.9
72.5°	2084.9	2235.7	1483.8	630.2	488.5	494.0	517.6	539.4	557.6	577.5	597.5
75°	710.1	960.7	944.4	515.8	441.3	455.9	470.4	490.4	514.0	526.7	537.6
77.5°	415.9	430.4	503.1	419.5	397.7	405.0	421.3	437.7	457.7	470.4	479.5
80°	348.7	346.9	348.7	341.4	346.9	363.2	374.1	395.9	414.1	417.7	415.9
82.5°	283.3	297.8	299.7	296.0	312.4	325.1	334.2	346.9	345.1	348.7	356.0
85°	252.4	250.6	263.3	265.2	265.2	256.1	257.9	257.9	257.9	263.3	265.2
87.5°	252.4	210.7	163.5	147.1	154.4	145.3	138.0	136.2	150.7	165.3	161.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	5610.1	5610.1	5610.1	5610.1	5610.1
2.5°	5606.5	5611.9	5608.3	5608.3	5611.9
5°	5568.3	5577.4	5573.8	5577.4	5577.4
7.5°	5481.2	5493.9	5502.9	5512.0	5506.6
10°	5355.8	5377.6	5392.2	5403.1	5397.6
12.5°	5168.8	5188.8	5219.6	5237.8	5223.3
15°	4912.7	4969.0	4987.2	5012.6	4998.1
17.5°	4645.7	4680.2	4702.0	4725.6	4740.2
20°	4289.8	4317.0	4346.1	4357.0	4340.6
22.5°	3861.1	3875.7	3870.2	3886.6	3853.9
25°	3390.8	3399.8	3394.4	3408.9	3381.7
27.5°	2945.8	2944.0	2945.8	2927.6	2909.5
30°	2517.2	2500.8	2493.6	2466.3	2460.9
32.5°	2134.0	2077.7	2048.6	2008.7	1999.6
35°	1750.8	1670.9	1618.2	1572.8	1552.8
37.5°	1407.5	1311.3	1249.5	1209.6	1204.1
40°	1113.3	1024.3	980.7	958.9	955.3
42.5°	908.1	869.9	859.0	859.0	859.0
45°	828.2	826.4	835.4	842.7	844.5
47.5°	811.8	822.7	835.4	846.3	850.0
50°	811.8	822.7	831.8	842.7	846.3
52.5°	808.2	817.3	820.9	828.2	831.8
55°	797.3	802.7	802.7	806.4	810.0
57.5°	779.1	782.8	777.3	780.9	790.0
60°	761.0	764.6	755.5	764.6	770.0
62.5°	741.0	742.8	739.2	746.4	746.4
65°	708.3	704.7	710.1	715.6	717.4
67.5°	675.6	666.5	672.0	673.8	677.4
69°	650.2	644.7	646.6	650.2	653.8
70°	632.0	628.4	632.0	637.5	642.9
72.5°	586.6	588.4	601.1	612.0	622.9
75°	544.8	557.6	573.9	597.5	610.2
77.5°	494.0	503.1	515.8	541.2	564.8
80°	426.8	432.2	434.1	443.1	441.3
82.5°	346.9	341.4	337.8	334.2	332.4
85°	248.8	247.0	232.5	221.6	221.6
87.5°	148.9	141.7	134.4	125.3	119.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)